Formula S	Stud	lent Netherlands		
2025 Inspe	ectic	on Sheet		
Electrical I	nsp	ection		
Car Numb	er			
University				
		To the difference	Ormanata	
		Failed items	Comments	
ESE				
LOF				
Progress		0.00%		
1 Togreeo		REQUIRED RESOURCES		
No.		Checkpoint	Checkbox	Comment
	-	An ESO must attend		
	-	LV battery or cell datasheet		
	-	Samples of all wire types used for the tractive system	-	
	-	Photographs of all inaccessible TS connections	-	
	-	Fully assembled spare boards of all inaccessible TS boards		
	-	For self developed LV battery packs: an opened battery pack, laptop and cables to display data of the AMS		
	-	Laptop and cables to display data of the AMS		
	-	Power Supply for TSAL test and connectors with shrouded banana jacks as in rule IN 4.2.1		
	-	The connector to safely close the SDC while the HVD is removed		
	-	Datasheets for used wiring, insulation materials, and TS components NOT ON A CELL		
		PHONE		
	-	At least all pap paged parts of the ESE NOT ON A CELL PHONE	а	
	-	"TSAL green" sign		
		TS VOLTAGE		
No.		Checkpoint	Checkbox	Comment
	►	Measure voltage at TS measuring points		
	1	Equal or less than 60 VDC		
	1	Legual or less than 60 VDC		
No.	1	Equal or less than 60 VDC  LV BATTERY  Checkpoint	Checkbox	Comment
No.	1	Equal or less than 60 VDC LV BATTERY Checkpoint Voltage ≤ 60VDC	Checkbox	Comment
No.	1 2 3	Equal or less than 60 VDC LV BATTERY Checkpoint Voltage ≤ 60VDC Rigid and sturdy casing	Checkbox	Comment
No.	1 2 3 4	Equal or less than 60 VDC LV BATTERY Checkpoint Voltage ≤ 60VDC Rigid and sturdy casing Short circuit protection (e.g. fused) Debied Example	Checkbox	Comment
No.	1 2 3 4 5	Equal or less than 60 VDC LV BATTERY Checkpoint Voltage ≤ 60VDC Rigid and sturdy casing Short circuit protection (e.g. fused) Behind Firewall Proper insulation of internal electrical connections	Checkbox	Comment
No.	1 2 3 4 5 6 7	Equal or less than 60 VDC <b>LV BATTERY</b> Checkpoint  Voltage ≤ 60VDC  Rigid and sturdy casing  Short circuit protection (e.g. fused)  Behind Firewall  Proper insulation of internal electrical connections  Proper mounting of cells	Checkbox	Comment
No.	1 2 3 4 5 6 7 8	Equal or less than 60 VDC  IV BATTERY  Checkpoint  Voltage ≤ 60VDC  Rigid and sturdy casing Short circuit protection (e.g. fused) Behind Firewall  Proper insulation of internal electrical connections Proper mounting of cells Complete battery pack inside rollover protection envelope		Comment
No.	1 2 3 4 5 6 7 8	Equal or less than 60 VDC <b>LV BATTERY</b> Checkpoint  Voltage ≤ 60VDC  Rigid and sturdy casing Short circuit protection (e.g. fused) Behind Firewall  Proper insulation of internal electrical connections Proper mounting of cells Complete battery pack inside rollover protection envelope All following checks only needed for Li-lon batteries (other than LiFePO4):	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 8 ▶ 9	Equal or less than 60 VDC  IV BATTERY  Checkpoint  Voltage ≤ 60VDC  Rigid and sturdy casing Short circuit protection (e.g. fused) Behind Firewall  Proper insulation of internal electrical connections Proper mounting of cells Complete battery pack inside rollover protection envelope All following checks only needed for Li-lon batteries (other than LiFePO4):  UL94-V0, FAR25 or equivalent casing		Comment
No.	1 2 3 4 5 6 7 8 8 ▶ 9 9	Equal or less than 60 VDC  IV BATTERY  Checkpoint  Voltage ≤ 60VDC  Rigid and sturdy casing Short circuit protection (e.g. fused) Behind Firewall  Proper insulation of internal electrical connections Proper mounting of cells Complete battery pack inside rollover protection envelope All following checks only needed for Li-lon batteries (other than LiFePO4):  UL94-V0 , FAR25 or equivalent casing Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet,		Comment
No.	1 2 3 4 5 6 7 8 8 ▶ 9 10	Equal or less than 60 VDC LV BATTERY Checkpoint Voltage ≤ 60VDC Rigid and sturdy casing Short circuit protection (e.g. fused) Behind Firewall Proper insulation of internal electrical connections Proper mounting of cells Complete battery pack inside rollover protection envelope All following checks only needed for Li-lon batteries (other than LiFePO4): UL94-V0 , FAR25 or equivalent casing Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)		Comment
No.	1 2 3 4 5 6 7 8 8 ▶ 9 9	Equal or less than 60 VDC  IV BATTERY  Checkpoint  Voltage ≤ 60VDC  Rigid and sturdy casing Short circuit protection (e.g. fused) Behind Firewall  Proper insulation of internal electrical connections Proper mounting of cells  Complete battery pack inside rollover protection envelope All following checks only needed for Li-Ion batteries (other than LiFePO4):  UL94-V0, FAR25 or equivalent casing Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)  SELF DEVELOPED PCBS  Charlemeint	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 8 ▶ 9 10	Equal or less than 60 VDC  IV BATTERY  Checkpoint  Voltage ≤ 60VDC  Rigid and sturdy casing Short circuit protection (e.g. fused) Behind Firewall  Proper insulation of internal electrical connections Proper mounting of cells  Complete battery pack inside rollover protection envelope All following checks only needed for Li-lon batteries (other than LiFePO4): UL94-V0, FAR25 or equivalent casing Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)  SELF DEVELOPED PCBS  Checkpoint	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 8 ▶ 9 9 10	Equal or less than 60 VDC         LV BATTERY         Checkpoint         Voltage ≤ 60VDC         Rigid and sturdy casing         Short circuit protection (e.g. fused)         Behind Firewall         Proper insulation of internal electrical connections         Proper mounting of cells         Complete battery pack inside rollover protection envelope         All following checks only needed for Li-lon batteries (other than LiFePO4):         UL94-V0, FAR25 or equivalent casing         Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)         SELF DEVELOPED PCBS         Checkpoint         Ask for spare PCB of self developed PCBs         Sufficient spacing reparding system voltage and implementation	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 8 ▶ 9 9 10 10 ▶ 11	Equal or less than 60 VDC         LV BATTERY         Checkpoint         Voltage ≤ 60VDC         Rigid and sturdy casing         Short circuit protection (e.g. fused)         Behind Firewall         Proper insulation of internal electrical connections         Proper mounting of cells         Complete battery pack inside rollover protection envelope         All following checks only needed for Li-lon batteries (other than LiFePO4):         UL94-V0, FAR25 or equivalent casing         Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)         SELF DEVELOPED PCBS         Checkpoint         Ask for spare PCB of self developed PCBs         Sufficient spacing regarding system voltage and implementation         Sufficient rating of isolators regarding system voltage, check datasheets	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 8 ▶ 9 10 10 11 12 13	Equal or less than 60 VDC         LV BATTERY         Checkpoint         Voltage ≤ 60VDC         Rigid and sturdy casing         Short circuit protection (e.g. fused)         Behind Firewall         Proper insulation of internal electrical connections         Proper mounting of cells         Complete battery pack inside rollover protection envelope         All following checks only needed for Li-Ion batteries (other than LiFePO4):         UL94-V0, FAR25 or equivalent casing         Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)         SELF DEVELOPED PCBS         Checkpoint         Ask for spare PCB of self developed PCBs         Sufficient spacing regarding system voltage and implementation         Sufficient rating of isolators regarding system voltage, check datasheets         Sufficient insulation and temperature rating of coating if used, check datasheet	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 8 ▶ 9 10 10 11 12 13 14	Equal or less than 60 VDC         LV BATTERY         Checkpoint         Voltage ≤ 60VDC         Rigid and sturdy casing         Short circuit protection (e.g. fused)         Behind Firewall         Proper insulation of internal electrical connections         Proper mounting of cells         Complete battery pack inside rollover protection envelope         All following checks only needed for Li-lon batteries (other than LiFePO4):         UL94-V0, FAR25 or equivalent casing         Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)         SELF DEVELOPED PCBS         Checkpoint         Ask for spare PCB of self developed PCBs         Sufficient rating of isolators regarding system voltage, check datasheets         Sufficient rating of isolators regarding system voltage, check datasheets         Sufficient insulation and temperature rating of coating if used, check datasheet	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 8 ▶ 9 10 10 11 12 13 14 15	Equal or less than 60 VDC         LV BATTERY         Checkpoint         Voltage ≤ 60VDC         Rigid and sturdy casing         Short circuit protection (e.g. fused)         Behind Firewall         Proper insulation of internal electrical connections         Proper mounting of cells         Complete battery pack inside rollover protection envelope         All following checks only needed for Li-Ion batteries (other than LiFePO4):         UL94-V0 , FAR25 or equivalent casing         Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)         SELF DEVELOPED PCBS         Checkpoint         Ask for spare PCB of self developed PCBs         Sufficient rating of isolators regarding system voltage, check datasheets         Sufficient rating of isolators regarding system voltage, check datasheets         Sufficient insulation and temperature rating of coating if used, check datasheet         Coating process according to datasheet         The 1 min AC RMS isolation test voltage is ≥ 3x max. TS voltage	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 8 ▶ 9 9 10 11 11 12 13 14 15 16	Equal or less than 60 VDC         LV BATTERY         Checkpoint         Voltage ≤ 60VDC         Rigid and sturdy casing         Short circuit protection (e.g. fused)         Behind Firewall         Proper insulation of internal electrical connections         Proper mounting of cells         Complete battery pack inside rollover protection envelope         All following checks only needed for Li-Ion batteries (other than LiFePO4):         UL94-V0 , FAR25 or equivalent casing         Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)         SELF DEVELOPED PCBS         Checkpoint         Ask for spare PCB of self developed PCBs         Sufficient rating of isolators regarding system voltage, check datasheets         Sufficient rating of isolators regarding system voltage, check datasheets         Sufficient insulation and temperature rating of coating if used, check datasheet         Coating process according to datasheet         The 1 min AC RMS isolation test voltage is ≥ 3x max. TS voltage         The working voltage of the isolation barrier, if specified in the datasheet, is higher than the	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 ▶ 9 10 10 11 12 13 14 15 16	Equal or less than 60 VDC         LV BATTERY         Checkpoint         Voltage ≤ 60VDC         Rigid and sturdy casing         Short circuit protection (e.g. fused)         Behind Firewall         Proper insulation of internal electrical connections         Proper mounting of cells         Complete battery pack inside rollover protection envelope         All following checks only needed for Li-lon batteries (other than LiFePO4):         UL94-V0, FAR25 or equivalent casing         Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)         SELF DEVELOPED PCBS         Checkpoint         Ask for spare PCB of self developed PCBs         Sufficient rating of isolators regarding system voltage, check datasheets         Sufficient rating of isolators regarding system voltage, check datasheet         Coating process according to datasheet         The 1 min AC RMS isolation test voltage is ≥ 3x max. TS voltage         The working voltage of the isolation barrier, if specified in the datasheet, is higher than the maximum TS voltage		Comment
No.	1 2 3 4 5 6 7 8 ▶ 9 10 10 11 12 13 14 15 16 17	Equal or less than 60 VDC         LV BATTERY         Checkpoint         Voltage ≤ 60VDC         Rigid and sturdy casing         Short circuit protection (e.g. fused)         Behind Firewall         Proper insulation of internal electrical connections         Proper mounting of cells         Complete battery pack inside rollover protection envelope         All following checks only needed for Li-lon batteries (other than LiFePO4):         UL94-V0, FAR25 or equivalent casing         Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)         SELF DEVELOPED PCBS         Checkpoint         Ask for spare PCB of self developed PCBs         Sufficient rating of isolators regarding system voltage and implementation         Sufficient rating of isolators regarding system voltage, check datasheets         Sufficient insulation and temperature rating of coating if used, check datasheet         Coating process according to datasheet         The 1 min AC RMS isolation test voltage is ≥ 3x max. TS voltage         The working voltage of the isolation barrier, if specified in the datasheet, is higher than the maximum TS voltage         BSPD PCB is standalone with only minimum interface	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 9 9 10 10 11 12 13 14 15 16 17 18	Equal or less than 60 VDC         LV BATTERY         Checkpoint         Voltage ≤ 60VDC         Rigid and sturdy casing         Short circuit protection (e.g. fused)         Behind Firewall         Proper insulation of internal electrical connections         Proper mounting of cells         Complete battery pack inside rollover protection envelope         All following checks only needed for Li-lon batteries (other than LiFePO4):         UL94-V0, FAR25 or equivalent casing         Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)         SELF DEVELOPED PCBS         Checkpoint         Ask for spare PCB of self developed PCBs         Sufficient rating of isolators regarding system voltage and implementation         Sufficient rating of isolators regarding system voltage, check datasheets         Sufficient insulation and temperature rating of coating if used, check datasheet         Coating process according to datasheet         The 1 min AC RMS isolation test voltage is ≥ 3x max. TS voltage         The working voltage of the isolation barrier, if specified in the datasheet, is higher than the maximum TS voltage         BSPD PCB is standalone with only minimum interface         BSPD PCB (S) are directly supplied from the LVMS	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 ▶ 9 10 11 12 13 14 15 16 17 18	Equal or less than 60 VDC  IV BATTERY  Checkpoint  Voltage ≤ 60VDC  Rigid and sturdy casing Short circuit protection (e.g. fused) Behind Firewall  Proper insulation of internal electrical connections Proper mounting of cells Complete battery pack inside rollover protection envelope All following checks only needed for Li-Ion batteries (other than LiFePO4): UL94-V0, FAR25 or equivalent casing Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)  SELF DEVELOPED PCBS Checkpoint Ask for spare PCB of self developed PCBs Sufficient rating of isolators regarding system voltage, check datasheets Sufficient rating of isolators regarding system voltage, check datasheet Coating process according to datasheet The 1 min AC RMS isolation barrier, if specified in the datasheet, is higher than the maximum TS voltage BSPD PCB is standalone with only minimum interface BSPD PCB(s) are directly supplied from the LVMS MASTER SWITCHES Checkpoint	Checkbox	Comment
No.	1 2 3 4 5 6 7 7 8 ▶ 9 9 10 11 12 13 14 15 16 17 18	Equal or less than 60 VDC         LV BATTERY         Checkpoint         Voltage ≤ 60VDC         Rigid and sturdy casing         Short circuit protection (e.g. fused)         Behind Firewall         Proper insulation of internal electrical connections         Proper mounting of cells         Complete battery pack inside rollover protection envelope         All following checks only needed for Li-lon batteries (other than LiFePO4):         UL94-V0, FAR25 or equivalent casing         Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)         SELF DEVELOPED PCBS         Checkpoint         Ask for spare PCB of self developed PCBs         Sufficient rating of isolators regarding system voltage and implementation         Sufficient rating of isolators regarding system voltage, check datasheets         Sufficient rating of isolators regarding system voltage, check datasheets         Coating process according to datasheet         The 1 min AC RMS isolation test voltage is ≥ 3x max. TS voltage         The working voltage of the isolation barrier, if specified in the datasheet, is higher than the maximum TS voltage         BSPD PCB is standalone with only minimum interface         BSPD PCB(s) are directly supplied from the LVMS         MASTER SWITCHES         Checkpoint	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 8 9 9 10 11 11 12 13 14 15 16 17 18 19 20	Equal or less than 60 VDC  IV BATTERY  Checkpoint  Voltage ≤ 60VDC  Rigid and sturdy casing Short circuit protection (e.g. fused) Behind Firewall  Proper insulation of internal electrical connections Proper mounting of cells  Complete battery pack inside rollover protection envelope All following checks only needed for Li-lon batteries (other than LiFePO4): UL94-V0, FAR25 or equivalent casing Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)  SELF DEVELOPED PCBS  Checkpoint Ask for spare PCB of self developed PCBs Sufficient rating of isolators regarding system voltage and implementation Sufficient rating of isolators regarding system voltage, check datasheets Sufficient insulation and temperature rating of coating if used, check datasheet Coating process according to datasheet The 1 min AC RMS isolation test voltage is ≥ 3x max. TS voltage The working voltage of the isolation barrier, if specified in the datasheet, is higher than the maximum TS voltage BSPD PCB is standalone with only minimum interface BSPD PCB(s) are directly supplied from the LVMS MASTER SWITCHES Checkpoint TSMS & LVMS installed on the right side of the vehicle and located next to each other TSMS & LVMS are easily accessible	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 8 ▶ 9 9 10 11 11 12 13 14 15 16 17 18 19 20 ℃	Equal or less than 60 VDC  IV BATTERY  Checkpoint  Voltage ≤ 60VDC  Rigid and sturdy casing Short circuit protection (e.g. fused) Behind Firewall  Proper insulation of internal electrical connections Proper mounting of cells Complete battery pack inside rollover protection envelope All following checks only needed for Li-Ion batteries (other than LiFePO4): UL94-V0, FAR25 or equivalent casing Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)  SELF DEVELOPED PCBS Checkpoint Ask for spare PCB of self developed PCBs Sufficient rating of isolators regarding system voltage, check datasheets Sufficient rating of isolators regarding system voltage, check datasheet Coating process according to datasheet The 1 min AC RMS isolation test voltage is ≥ 3x max. TS voltage The working voltage of the isolation barrier, if specified in the datasheet, is higher than the maximum TS voltage BSPD PCB is standalone with only minimum interface BSPD PCB(s) are directly supplied from the LVMS MASTER SWITCHES Checkpoint TSMS & LVMS installed on the right side of the vehicle and located next to each other TSMS & LVMS are easily accessible All master switches are located above 80% of shoulder height of percy	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 ▶ 9 9 10 11 12 13 14 15 16 17 18 19 20 ⊙ 21	Equal or less than 80 VDC  IV BATTERY  Checkpoint  Voltage ≤ 60VDC  Rigid and sturdy casing Short circuit protection (e.g. fused) Behind Firewall  Proper insulation of internal electrical connections Proper insulation of internal electrical connection envelope All following checks only needed for Li-lon batteries (other than LiFePO4): UL94-V0, FAR25 or equivalent casing Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)  SELF DEVELOPED PCBS Checkpoint Ask for spare PCB of self developed PCBs Sufficient rating of isolators regarding system voltage and implementation Sufficient rating of isolators regarding system voltage, check datasheets Sufficient insulation and temperature rating of coating if used, check datasheet Coating process according to datasheet The 1 min AC RMS isolation barrier, if specified in the datasheet, is higher than the maximum TS voltage BSPD PCB is standalone with only minimum interface BSPD PCB(s) are directly supplied from the LVMS MASTER SWITCHES Checkpoint TSMS & LVMS installed on the right side of the vehicle and located next to each other TSMS & LVMS are easily accessible All master switches are located above 80% of shoulder height of percy Rigidly mounted	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 ▶ 9 9 10 11 12 13 14 15 16 17 18 19 20 ⊙ 21 22	Equal or less than 80 VDC  LV BATTERY  Checkpoint  Voltage ≤ 60VDC  Rigid and sturdy casing  Short circuit protection (e.g. fused)  Behind Firewall  Proper insulation of internal electrical connections  Proper mounting of cells  Complete battery pack inside rollover protection envelope  All following checks only needed for Li-lon batteries (other than LiFePO4): UL94-V0, FAR25 or equivalent casing  Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower)  SELF DEVELOPED PCBS  Checkpoint  Ask for spare PCB of self developed PCBs  Sufficient rating of isolators regarding system voltage, check datasheets  Sufficient rating of isolators regarding system voltage, check datasheet  Coating process according to datasheet  The 1 min AC RMS isolation test voltage is ≥ 3x max. TS voltage  SPD PCB is standalone with only minimum interface  BSPD PCB(s) are directly supplied from the LVMS  MASTER SWITCHES  Checkpoint  All master switches are located above 80% of shoulder height of percy  Rigidly mounted  Not mounted on removable bodywork	Checkbox	Comment
No.	1 2 3 4 5 6 7 8 ▶ 9 9 10 11 12 13 14 15 16 17 18 20 ○ 21 22 23	Equal or less than 60 VDC LV BATTERY Checkpoint Voltage ≤ 60VDC Rigid and sturdy casing Short circuit protection (e.g. fused) Behind Firewall Proper insulation of internal electrical connections Proper mounting of cells Complete battery pack inside rollover protection envelope All following checks only needed for Li-lon batteries (other than LiFePO4): UL94-V0, FAR25 or equivalent casing Overtemperature protection of at least 30% of the cells (max. 60 C or datasheet, whichever is lower) SELF DEVELOPED PCBS Checkpoint Ask for spare PCB of self developed PCBs Sufficient spacing regarding system voltage and implementation Sufficient rating of isolators regarding system voltage, check datasheets Sufficient rating of isolators regarding system voltage, check datasheet Coating process according to datasheet The 1 min AC RMS isolation barrier, if specified in the datasheet, is higher than the maximum TS voltage BSPD PCB is standalone with only minimum interface BSPD PCB is standalone with only minimum interface BSPD PCB(s) are directly supplied from the LVMS MASTER SWITCHES Checkpoint All master switches are located above 80% of shoulder height of percy Rigidly mounted Not mounted on removable bodywork Rotary type with removable handle		Comment  Comment

	24	ON position in horizontal		
	24			
	25	"ON" and "OFF" positions marked		
	26	TSMS with locking mechanism for "OFF" position		
	27	LVMS marked with "LV" and symbol showing a red spark in a white edged blue triangle		
	28	LVMS mounted on an red circular area on high contrast background		
		Circular area diameter >50 mm		
	0			
	29	TSMS marked with "TS" and triangle with black lightning bolt on yellow background		
	30	TSMS mounted on an orange circular area on high contrast background		
	$\odot$	Circular area diameter ≥50 mm		
		MEASURING POINTS		
No		Checkpoint	Checkbox	Comment
	21	Two TS voltage measuring points on erange background		Comment
	31	A black IV ground measuring points on orange background		
	32	A black LV ground measuring point installed		
	33	Next to the master switches		
	34	4mm shrouded banana jacks		
	35	Non conductive cover		
	36	Cover removable without tools		
	37	Correctly marked (TS+ TS- GND)		
	01			
No		Checkmaint	Chaeltheur	Commont
INU.			Спескоох	Comment
	38	Two red facting shudown buttons installed next to the main hoop		
	39	Right and left on the vehicle at approx. height of drivers head		
	40	Push-Pull or Push-Rotate-Pull functionality		
	$\odot$	Diameter > 39 mm		
	41	Marked with red sparked sticker		
	42	One cockpit shutdown button installed		
	12	Puch-Pull or Puch-Potate-Pull functionality		
	43			
	44	Marked with red sparked sticker		
	45	Easy actuation by the driver		
	$\odot$	Diameter ≥24 mm		
	46	All shutdown buttons are red in colour		
	47	Inertia switch rigidly mounted upright to the chassis and can be demounted for functionality		
	47	test		
		HIGH VOLTAGE DISCONNECT		
No.		Checkpoint	Checkbox	Comment
No.	48	Checkpoint Clearly marked with "HVD"	Checkbox	Comment
No.	48 ⊙	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm	Checkbox	Comment
No.	48 ⊙ 49	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible	Checkbox	Comment
No.	48 ⊙ 49	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible	Checkbox	Comment
No.	48 ⊙ 49 50	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires)	Checkbox	Comment
No.	48 ⊙ 49 50 51	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Clearly marked by the problem of the test of the set of the test of the set of the test of test of test of the test of the test of test	Checkbox	Comment
No.	48 ⊙ 49 50 51 ►	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD	Checkbox	Comment
No.	48 ⊙ 49 50 51 ► 52	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools	Checkbox	Comment
No.	48 ⊙ 49 50 51 ► 52 53	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe)	Checkbox	Comment
No.	48 ⊙ 49 50 51 ► 52 53 54	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar	Checkbox	Comment
No.	48 ⊙ 49 50 51 ► 52 53 54	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS)	Checkbox	Comment
No.	48 ⊙ 49 50 51 ► 52 53 54	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint	Checkbox	Comment
No.	48 ⊙ 49 50 51 ► 52 53 54 55	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated	Checkbox	Comment
No.	48 ○ 49 50 51 ► 52 53 54 55	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different	Checkbox	Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is	Checkbox	Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary)	Checkbox	Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57	Checkpoint         Clearly marked with "HVD"         Distance to ground greater than 350 mm         Unobstructed and directly accessible         No remote actuation (e.g. through wires)         Integrated interlock         Stand next to the vehicle. Let ESO remove HVD         Removed within 10s without tools         TS protection still given (insulated test probe)         If a dummy connector for protection is used, it must be stored at the push bar         ACCELERATION PEDAL POSITION SENSOR (APPS)         Checkpoint         Returns to original position if not actuated         At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary)         Sensors are protected from being mechanically over-stressed (positive stop of pedal)	Checkbox	Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary) Sensors are protected from being mechanically over-stressed (positive stop of pedal) Minimum two springs installed to return pedal	Checkbox	Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary) Sensors are protected from being mechanically over-stressed (positive stop of pedal) Minimum two springs installed to return pedal Each spring still returns pedal with the second one disconnected (springs in the torque	Checkbox	Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary) Sensors are protected from being mechanically over-stressed (positive stop of pedal) Minimum two springs installed to return pedal Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted)	Checkbox	Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary) Sensors are protected from being mechanically over-stressed (positive stop of pedal) Minimum two springs installed to return pedal Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted) ACCUMULATOR MANAGEMENT SYSTEM	Checkbox	Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary) Sensors are protected from being mechanically over-stressed (positive stop of pedal) Minimum two springs installed to return pedal Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted) ACCUMULATOR MANAGEMENT SYSTEM Checkpoint	Checkbox	Comment  Comment  Comment  Comment  Comment  Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59 ►	Checkpoint         Clearly marked with "HVD"         Distance to ground greater than 350 mm         Unobstructed and directly accessible         No remote actuation (e.g. through wires)         Integrated interlock         Stand next to the vehicle. Let ESO remove HVD         Removed within 10s without tools         TS protection still given (insulated test probe)         If a dummy connector for protection is used, it must be stored at the push bar         ACCELERATION PEDAL POSITION SENSOR (APPS)         Checkpoint         Returns to original position if not actuated         At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary)         Sensors are protected from being mechanically over-stressed (positive stop of pedal)         Minimum two springs installed to return pedal         Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted)         ACCUMULATOR MANAGEMENT SYSTEM         Checkpoint         Install TS accumulator, activate LVS, and connect laptop to	Checkbox	Comment  Comment  Comment  Comment  Comment  Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59 ►	Checkpoint         Clearly marked with "HVD"         Distance to ground greater than 350 mm         Unobstructed and directly accessible         No remote actuation (e.g. through wires)         Integrated interlock         Stand next to the vehicle. Let ESO remove HVD         Removed within 10s without tools         TS protection still given (insulated test probe)         If a dummy connector for protection is used, it must be stored at the push bar         ACCELERATION PEDAL POSITION SENSOR (APPS)         Checkpoint         Returns to original position if not actuated         At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary)         Sensors are protected from being mechanically over-stressed (positive stop of pedal)         Minimum two springs installed to return pedal         Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted)         ACCUMULATOR MANAGEMENT SYSTEM         Checkpoint         Install TS accumulator, activate LVS, and connect laptop to the AMS	Checkbox	Comment  Comment  Comment  Comment  Comment  Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59 ► 60	Checkpoint         Clearly marked with "HVD"         Distance to ground greater than 350 mm         Unobstructed and directly accessible         No remote actuation (e.g. through wires)         Integrated interlock         Stand next to the vehicle. Let ESO remove HVD         Removed within 10s without tools         TS protection still given (insulated test probe)         If a dummy connector for protection is used, it must be stored at the push bar         ACCELERATION PEDAL POSITION SENSOR (APPS)         Checkpoint         Returns to original position if not actuated         At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary)         Sensors are protected from being mechanically over-stressed (positive stop of pedal)         Minimum two springs installed to return pedal         Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted)         ACCUMULATOR MANAGEMENT SYSTEM         Checkpoint         Install TS accumulator, activate LVS, and connect laptop to the AMS         AMS data can be displayed	Checkbox	Comment  Comment  Comment  Comment  Comment  Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59 ► 60 61	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary) Sensors are protected from being mechanically over-stressed (positive stop of pedal) Minimum two springs installed to return pedal Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted) ACCUMULATOR MANAGEMENT SYSTEM Checkpoint Install TS accumulator, activate LVS, and connect laptop to the AMS AMS data can be displayed If Li-Ion LV battery's AMS data can be displayed	Checkbox	Comment  Comment  Comment  Comment  Comment  Comment  Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59 ► 60 61 ►	Checkpoint         Clearly marked with "HVD"         Distance to ground greater than 350 mm         Unobstructed and directly accessible         No remote actuation (e.g. through wires)         Integrated interlock         Stand next to the vehicle. Let ESO remove HVD         Removed within 10s without tools         TS protection still given (insulated test probe)         If a dummy connector for protection is used, it must be stored at the push bar         ACCELERATION PEDAL POSITION SENSOR (APPS)         Checkpoint         Returns to original position if not actuated         At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary)         Sensors are protected from being mechanically over-stressed (positive stop of pedal)         Minimum two springs installed to return pedal         Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted)         ACCUMULATOR MANAGEMENT SYSTEM         Checkpoint         Install TS accumulator, activate LVS, and connect laptop to the AMS         AMS data can be displayed         If Li-Ion LV battery: LV battery's AMS data can be displayed         Disconnect TS accumulator, if applicable	Checkbox	Comment  Comment  Comment  Comment  Comment  Comment  Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59 ► 60 61 ►	Checkpoint         Clearly marked with "HVD"         Distance to ground greater than 350 mm         Unobstructed and directly accessible         No remote actuation (e.g. through wires)         Integrated interlock         Stand next to the vehicle. Let ESO remove HVD         Removed within 10s without tools         TS protection still given (insulated test probe)         If a dummy connector for protection is used, it must be stored at the push bar         ACCELERATION PEDAL POSITION SENSOR (APPS)         Checkpoint         Returns to original position if not actuated         At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary)         Sensors are protected from being mechanically over-stressed (positive stop of pedal)         Minimum two springs installed to return pedal         Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted)         ACCUMULATOR MANAGEMENT SYSTEM         Checkpoint         Install TS accumulator, activate LVS, and connect laptop to the AMS         AMS data can be displayed         If Li-lon LV battery: LV battery's AMS data can be displayed         Disconnect TS accumulator, if applicable         AMS indicator light	Checkbox	Comment  Comment  Comment  Comment  Comment  Comment  Comment  Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59 ► 60 61 ► €2 55 56 57 58 59 €2 55 56 57 58 59 €2 50 50 50 50 50 50 50 50 50 50	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary) Sensors are protected from being mechanically over-stressed (positive stop of pedal) Minimum two springs installed to return pedal Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted) ACCUMULATOR MANAGEMENT SYSTEM Checkpoint Install TS accumulator, activate LVS, and connect laptop to the AMS AMS data can be displayed If Li-lon LV battery: LV battery's AMS data can be displayed Disconnect TS accumulator, if applicable AMS indicator light is illuminated red	Checkbox	Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59 ► 60 61 ► € 62 63	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary) Sensors are protected from being mechanically over-stressed (positive stop of pedal) Minimum two springs installed to return pedal Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted) ACCUMULATOR MANAGEMENT SYSTEM Checkpoint Install TS accumulator, activate LVS, and connect laptop to the AMS AMS data can be displayed If Li-Ion LV battery's AMS data can be displayed Disconnect TS accumulator, if applicable AMS indicator light is illuminated red is illuminated red	Checkbox	Comment  Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59 ► 60 61 ► € 62 63 64	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary) Sensors are protected from being mechanically over-stressed (positive stop of pedal) Minimum two springs installed to return pedal Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted) ACCUMULATOR MANAGEMENT SYSTEM Checkpoint Install TS accumulator, activate LVS, and connect laptop to the AMS AMS data can be displayed If Li-Ion LV battery: LV battery's AMS data can be displayed Disconnect TS accumulator, if applicable AMS indicator light is inside the cockpit and marked with "AMS" is visible in brindit sunlinbt even from outside	Checkbox	Comment
No.	48 ○ 49 50 51 52 53 54 55 56 57 58 59 ► 60 61 ► 62 63 64 65	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary) Sensors are protected from being mechanically over-stressed (positive stop of pedal) Minimum two springs installed to return pedal Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted) ACCUMULATOR MANAGEMENT SYSTEM Checkpoint Install TS accumulator, activate LVS, and connect laptop to the AMS AMS data can be displayed If Li-Ion LV battery: LV battery's AMS data can be displayed Disconnect TS accumulator, if applicable AMS indicator light is illuminated red is visible in bright sunlight, even from outside is visible for the driver	Checkbox	Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59 ► 60 61 ► 62 63 64 65	Checkpoint Ciearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary) Sensors are protected from being mechanically over-stressed (positive stop of pedal) Minimum two springs installed to return pedal Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted) ACCUMULATOR MANAGEMENT SYSTEM Checkpoint Install TS accumulator, activate LVS, and connect laptop to the AMS AMS data can be displayed If Li-lon LV battery: LV battery's AMS data can be displayed Disconnect TS accumulator, if applicable AMS indicator light is illuminated red is visible in bright sunlight, even from outside is visible for the driver	Checkbox	Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59 ► 60 61 ► 62 63 64 65	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary) Sensors are protected from being mechanically over-stressed (positive stop of pedal) Minimum two springs installed to return pedal Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted) ACCUMULATOR MANAGEMENT SYSTEM Checkpoint Install TS accumulator, activate LVS, and connect laptop to the AMS AMS data can be displayed If Li-Ion LV battery: LV battery's AMS data can be displayed Disconnect TS accumulator, if applicable AMS indicator light is inside the cockpit and marked with "AMS" is visible in bright sunlight, even from outside is visible for the driver BRAKE LIGHT	Checkbox	Comment
No.	48 ○ 49 50 51 ► 52 53 54 55 56 57 58 59 ► 60 61 ► 62 63 64 65	Checkpoint Clearly marked with "HVD" Distance to ground greater than 350 mm Unobstructed and directly accessible No remote actuation (e.g. through wires) Integrated interlock Stand next to the vehicle. Let ESO remove HVD Removed within 10s without tools TS protection still given (insulated test probe) If a dummy connector for protection is used, it must be stored at the push bar ACCELERATION PEDAL POSITION SENSOR (APPS) Checkpoint Returns to original position if not actuated At least two sensors with different, non-intersecting transfer functions, with either different gradients and/or offsets to the other(s) are installed. (For digital sensors, a checksum is necessary) Sensors are protected from being mechanically over-stressed (positive stop of pedal) Minimum two springs installed to return pedal Each spring still returns pedal with the second one disconnected (springs in the torque encoders not counted) ACCUMULATOR MANAGEMENT SYSTEM Checkpoint Install TS accumulator, activate LVS, and connect laptop to the AMS AMS data can be displayed If Li-Ion LV battery: LV battery's AMS data can be displayed Disconnect TS accumulator, if applicable AMS indicator light is illuminated red is inside the cockpit and marked with "AMS" is visible for the driver BRAKE LIGHT Checkpoint	Checkbox	Comment

		_	
6	7 Clearly visible from behind the vehicle		
00	Located on venicle centenine		
69	Height between wheel centerline and drivers shoulder		
7	Pound triangle, or rootangular on black background		
G	15 cm <sup>2</sup> minimum illuminated area OR LED strips with a total length greater than 150mm		
	with elements closer than 20 mm apart		
7	Sufficient brightness of the brake light even in bright sunlight		
,			
	IS WIRING		
No.	Checkpoint	Checkbox	Comment
	All To winn and components (including the UVD) have to be in the relieves protection		
7:	An instance and behind the impact structure		
	envelope and benind the impact structures		
73	3 All TS wires and connectors have proper overcurrent protection		
7.	1 TS wiring channels are grange		
7	No other wires than TS wires are orange		
7	TS wiring outside electrical enclosures in separate non-conductive		
/	enclosure or orange shielded cable		
7	z Securely anchored to withstand at least 200N if outside of enclosure		
78	3 Located out of the way of possible snagging or damage		
7	Shielded against rotating/moving parts		
8	No wire lower than the chassis		
8	TS and LV wires separated (n/a for interlock)		
0.	Marked with dauge temperature rating and voltage rating (may TS voltage)		
0.			
8	suitable temperature rating of at least 85 degrees		
0	Positive locking mechanism on every screwed connection according to T10.2 and EV4.5.13		
84	(Photographs for all inaccessible TS connections)		
0	TSMPs: positive locking mechanism on banana jack according to EV/4.7.7 for TSMP		
0	1 SMFS. positive locking mechanism on banana jack according to EV4.7.7 for TSMF		
8	Insulation is not insulating tape or rubber-like paint		
8	The wiring outside of the impact structure is the shortest possible distance		
•			
8	S wires of outboard wheel motors must not be able to reach the cockpit opening in case		
	of a wire break		
Þ	Check interlocks on		
0	TS accumulator container(c)		
9	is accumulator container(s)		
9	1 Inverters		
Q,	Power distribution boxes		
9	3 Data logger enclosure		
0	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must		
94	t Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails		
94	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails		
94	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member. must act if the suspension fails		
94	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails		
94 91 91	<ul> <li> Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails</li> <li> Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails</li> <li>Interlocks can be opened for demonstration</li> </ul>		
94 91 91	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails     Interlocks can be opened for demonstration     TRACTIVE SYSTEM PROTECTION		
94 94 91	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails     Interlocks can be opened for demonstration     TRACTIVE SYSTEM PROTECTION     Checkooint		Comment
94 91 91 No.	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails     Interlocks can be opened for demonstration     TRACTIVE SYSTEM PROTECTION     Checkpoint     Otherd for each TO and name	Checkbox	Comment
94 91 91 No.	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails     Interlocks can be opened for demonstration     TRACTIVE SYSTEM PROTECTION     Checkpoint     Check for each TS enclosure	Checkbox	Comment
94 99 90 No.	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails     Interlocks can be opened for demonstration     TRACTIVE SYSTEM PROTECTION     Checkpoint     Check for each TS enclosure     Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm	Checkbox	Comment
9, 9: 9: No. 9	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails     Interlocks can be opened for demonstration     TRACTIVE SYSTEM PROTECTION     Check for each TS enclosure     Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)	Checkbox	Comment
9. 9. 9. No. ₽ 9.	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails     Interlocks can be opened for demonstration     TRACTIVE SYSTEM PROTECTION     Checkpoint     Check for each TS enclosure     Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)     Protected from moisture	Checkbox	Comment
9. 9: 9: No. 9: 9: 9:	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails     Interlocks can be opened for demonstration     TRACTIVE SYSTEM PROTECTION     Checkpoint     Check for each TS enclosure     Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)     Protected from moisture     Protected from moisture	Checkbox	Comment
94 91 91 91 91 No. 9 9 93 93 91 91 91	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails     Interlocks can be opened for demonstration     TRACTIVE SYSTEM PROTECTION     Checkpoint     Check for each TS enclosure     Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)     Protected from moisture     HV warning stickers placed (triangle with a black lightning bolt on yellow background)	Checkbox	Comment
9, 91 91 No. 91 91 91 91 91 91 91	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails     Interlocks can be opened for demonstration     TRACTIVE SYSTEM PROTECTION     Checkpoint     Check for each TS enclosure     Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)     Protected from moisture     HV warning stickers placed (triangle with a black lightning bolt on yellow background)     Energy meter is fully enclosed in a housing and not in the accumulator	Checkbox	Comment
9. 9. 9. No. ● 9. 9. 9. 9. 9. 9. 10.	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails     Interlocks can be opened for demonstration <b>TRACTIVE SYSTEM PROTECTION</b> Checkpoint     Check for each TS enclosure     Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)     Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)     Not varing stickers placed (triangle with a black lightning bolt on yellow background)     Energy meter is fully enclosed in a housing and not in the accumulator	Checkbox	Comment
9. 9: No. 9: 9: 9: 9: 9: 10: 10: 10:	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails     Interlocks can be opened for demonstration     TRACTIVE SYSTEM PROTECTION     Checkpoint     Check for each TS enclosure     Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)     Protected from moisture     HV warning stickers placed (triangle with a black lightning bolt on yellow background)     Energy meter is rigidly mounted	Checkbox	Comment
94 99 99 99 99 99 99 99 100 100 100	<ul> <li> Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails</li> <li> Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails</li> <li>Interlocks can be opened for demonstration</li> <li>TRACTIVE SYSTEM PROTECTION</li> <li>Checkpoint</li> <li>Check for each TS enclosure</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Protected from moisture</li> <li> HV warning stickers placed (triangle with a black lightning bolt on yellow background)</li> <li>Energy meter is fully enclosed in a housing and not in the accumulator</li> <li>Energy meter is rigidly mounted</li> <li>Check energy meter functionality and connectivity</li> </ul>	Checkbox	Comment
94 99 No. 99 99 99 99 99 100 100 100 (€)	<ul> <li> Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails</li> <li> Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails</li> <li>Interlocks can be opened for demonstration</li> <li>TRACTIVE SYSTEM PROTECTION</li> <li>Check for each TS enclosure</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Protected from moisture</li> <li> HV warning stickers placed (triangle with a black lightning bolt on yellow background)</li> <li>Energy meter is fully enclosed in a housing and not in the accumulator</li> <li>Energy meter is rigidly mounted</li> <li>Check energy meter functionality and connectivity</li> <li>Seal energy meter enclosure(s)</li> </ul>	Checkbox	Comment
9. 9. 9. 9. 9. 9. 9. 9. 9. 10. 10. 10. 0. 0. 0. 0. 0. 0.	<ul> <li> Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails</li> <li> Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails</li> <li>Interlocks can be opened for demonstration</li> <li>TRACTIVE SYSTEM PROTECTION</li> <li>Check for each TS enclosure</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Protected from moisture</li> <li> HV warning stickers placed (triangle with a black lightning bolt on yellow background)</li> <li>Energy meter is fully enclosed in a housing and not in the accumulator</li> <li>Energy meter functionality and connectivity</li> <li>Seal energy meter enclosure(s)</li> </ul>	Checkbox	Comment
9. 99 No. 99 99 99 99 100 100 (0 (0 (10) (0) (0) (0) (0) (0) (0) (0) (0) (0) (	<ul> <li> Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails</li> <li> Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails</li> <li>Interlocks can be opened for demonstration</li> <li>TRACTIVE SYSTEM PROTECTION</li> <li>Check for each TS enclosure</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Protected from moisture</li> <li> HV warning stickers placed (triangle with a black lightning bolt on yellow background)</li> <li>Denergy meter is rigidly mounted</li> <li>Check energy meter functionality and connectivity</li> <li>Seal energy meter enclosure(s)</li> <li>GROUNDING CHECKS</li> </ul>	Checkbox	Comment
94 99 No. 99 99 99 99 100 100 ( 100 ( 100) 0 ( 100) 0 ( 100) 100 ( 100)	<ul> <li> Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails</li> <li> Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails</li> <li>Interlocks can be opened for demonstration</li> <li>TRACTIVE SYSTEM PROTECTION</li> <li>Checkpoint</li> <li>Check for each TS enclosure</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Protected from moisture</li> <li> HV warning stickers placed (triangle with a black lightning bolt on yellow background)</li> <li>Denergy meter is fully enclosed in a housing and not in the accumulator</li> <li>I energy meter is rigidly mounted</li> <li>Check energy meter functionality and connectivity</li> <li>Seal energy meter enclosure(s)</li> <li>GROUNDING CHECKS</li> </ul>	Checkbox	Comment
9. 91 No. 99 99 99 99 100 100 ( 100 00 100 00 100 100 100	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails     Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails     Interlocks can be opened for demonstration     TRACTIVE SYSTEM PROTECTION     Checkpoint     Check for each TS enclosure     Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)     Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)     Not possible to reach any TS potentials with a black lightning bolt on yellow background)     Energy meter is fully enclosed in a housing and not in the accumulator     Energy meter is rigidly mounted     Check energy meter functionality and connectivity     Seal energy meter enclosure(s)     GROUNDING CHECKS     Checkpoint	Checkbox	Comment
94 94 No. 97 97 97 97 97 97 97 97 97 100 100 0 0 0 100 0 0 0 0 0 0 0 0 0 0	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails         Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails         Interlocks can be opened for demonstration <b>TRACTIVE SYSTEM PROTECTION</b> Checkpoint         Check for each TS enclosure         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         3 Protected from moisture         HV warning stickers placed (triangle with a black lightning bolt on yellow background)         D Energy meter is fully enclosed in a housing and not in the accumulator         I Energy meter is rigidly mounted         Check energy meter functionality and connectivity         2 Seal energy meter enclosure(s)         GROUNDING CHECKS         Checkpoint         A conductive part is grounded when having ≤100 mΩ measured at 1 A to LVS ground and being due to explicit onergine one being for a semiclosure	Checkbox	Comment
94 99 No. 99 99 99 99 99 100 100 (0 (10) (0 (10) (0 (10) (0 (10)) (0 (10)) (0 (10)) (0 (10)) (0 (10)) (0 (10))(10))	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails         Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails         5 Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails         5 Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails         5 Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails         5 Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails         5 Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails         5 Not possible to people for demonstration         7 Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         8 Protected from moisture         9 HV warning stickers placed (triangle with a black lightning bolt on yellow background)         0 Energy meter is fully enclosed in a housing and not in the accumulator         1 Energy meter is rigidly mounted         0 Check energy meter functionality and connectivity         2 Seal energy meter enclosure(s)         GROUNDING CHECKS         Checkpoint         A conductive part is grounded when having	Checkbox	Comment
94 99 No. 99 99 99 99 100 100 (0 100 (0 100) (0 10) (0) (0) (0) (0)) (0)	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails         Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails         S       Interlocks can be opened for demonstration         TRACTIVE SYSTEM PROTECTION         Checkpoint         Check for each TS enclosure         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         Net warning stickers placed (triangle with a black lightning bolt on yellow background)         D Energy meter is fully enclosed in a housing and not in the accumulator         1 Energy meter is rigidly mounted         Check energy meter functionality and connectivity         2 Seal energy meter enclosure(s)         GROUNDING CHECKS         Checkpoint         A conductive part is grounded when having ≤100 mΩ measured at 1 A to LVS ground and being able to continuously carry ≥10 % of the TS main fuse         It is possible to join two TS enclosures one following EV 3 1 1 point 1 and the other one	Checkbox	Comment
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9. 91 No. 91 93 93 93 93 94 100 100 (0 (10) (0 (10) (0) (0) (0) (0) (0) (0) (0) (0) (0) (	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails         Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails         Solution         TRACTIVE SYSTEM PROTECTION         Checkpoint         Check for each TS enclosure         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         3 Protected from moisture         9 HV warning stickers placed (triangle with a black lightning bolt on yellow background)         0 Energy meter is fully enclosed in a housing and not in the accumulator         1 Energy meter is rigidly mounted         Check cheregy meter functionality and connectivity         2 Seal energy meter enclosure(s)         GROUNDING CHECKS         Checkpoint         A conductive part is grounded when having ≤100 mΩ measured at 1 A to LVS ground and being able to continuously carry ≥10 % of the TS main fuse         It is possible to join two TS enclosures, one following EV 3.1.1 point 1 and the other one following point 2, if each individual is fully closed	Checkbox	Comment
94 99 No. 99 99 99 100 100 (0 100 (0 100) (0 10) (0) (0)) (0)	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails         Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails         S       Interlocks can be opened for demonstration         TRACTIVE SYSTEM PROTECTION         Checkpoint         Check for each TS enclosure         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         Protected from moisture         HV warning stickers placed (triangle with a black lightning bolt on yellow background)         D Energy meter is fully enclosed in a housing and not in the accumulator         I Energy meter is rigidly mounted         Check energy meter functionality and connectivity         2 Seal energy meter enclosure(s)         GROUNDING CHECKS         Checkpoint         A conductive part is grounded when having ≤100 mΩ measured at 1 A to LVS ground and being able to continuously carry ≥10 % of the TS main fuse         It is possible to join two TS enclosures, one following EV 3.1.1 point 1 and the o	Checkbox	Comment
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94 99 No. 99 99 99 99 99 99 100 100 ( 100 ( 100) 0 0 ( 100) 99 99 99 99 99 99 99 99 99 99 99 99 99	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails         Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails         Interlocks can be opened for demonstration <b>TRACTIVE SYSTEM PROTECTION</b> Checkpoint         Check for each TS enclosure         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         3 Protected from moisture         HV warning stickers placed (triangle with a black lightning bolt on yellow background)         D Energy meter is fully enclosed in a housing and not in the accumulator         I Energy meter is rigidly mounted         O Check energy meter functionality and connectivity         2 Seal energy meter enclosure(s)         GROUNDING CHECKS         Checkpoint         A conductive part is grounded when having ≤100 mΩ measured at 1 A to LVS ground and being able to continuously carry ≥10 % of the TS main fuse         It is possible to join two TS enclosures, one following EV 3.1.1 point 1 and the other one following point 2, if each individual is fully closed         Check for each TS enclosure         all materials used to build a TS enclosure separately have a resistance ≥2MΩ@500 V ⇒ fully isolated TS enclose, no grounded layer needed	Checkbox Checkbox Checkbox	Comment Commen
9. 91 No. 92 93 93 93 94 94 100 100 (0 100 (0 100) 0 (0 100) 0 100 (0 100) 100)	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails         Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails         Solution         TRACTIVE SYSTEM PROTECTION         Checkpoint         Check for each TS enclosure         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         3 Protected from moisture         9 HV warning stickers placed (triangle with a black lightning bolt on yellow background)         0 Energy meter is fully enclosed in a housing and not in the accumulator         1 Energy meter is rigidly mounted         0 Check point         A conductive part is grounded when having ≤100 mΩ measured at 1 A to LVS ground and being able to continuously carry ≥10 % of the TS main fuse         It is possible to join two TS enclosures, one following EV 3.1.1 point 1 and the other one following point 2, if each individual is fully closed         Check for each TS enclosure         all materials used to build a TS enclosure separately have a resistance ≥2MΩ@500 V ⇒ fully isolated TS encloser encorers, backing plates isolating materials used ⇒ fully	Checkbox	Comment Commen
94 99 No. 99 99 99 99 99 99 100 100 (0 100 (0 100) No. 100 100 100 100 100 100 100 100 100	<ul> <li> Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails</li> <li> Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails</li> <li>Interlocks can be opened for demonstration</li> <li>TRACTIVE SYSTEM PROTECTION</li> <li>Check for each TS enclosure</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Not possible to reach any TS potentials with a black lightning bolt on yellow background)</li> <li>Deregy meter is fully enclosed in a housing and not in the accumulator</li> <li>tenergy meter is rigidly mounted</li> <li>Check energy meter functionality and connectivity</li> <li>Seal energy meter enclosure(s)</li> <li>GROUNDING CHECKS</li> <li>Checkpoint</li> <li>A conductive part is grounded when having ≤100 mΩ measured at 1 A to LVS ground and being able to continuously carry ≥10 % of the TS main fuse</li> <li>It is possible to join two TS enclosures, one following EV 3.1.1 point 1 and the other one following point 2, if each individual is fully closed</li> <li>Check for each TS enclosure</li> <li> all materials used to build a TS enclosure separately have a resistance ≥2MΩ@500 V ⇒ fully isolated TS enclose, no grounded layer needed</li> <li> expect e.g. screws, (shielded) connectors, backing plates isolating materials used ⇒ fully isolated TS enclose, no grounded layer needed</li> <li> expect e.g. screws, (shielded) connectors, backing plates isolating materials used ⇒ fully isolated TS enclose, no grounded layer needed but protruding elements must be properly arrounded</li> </ul>	Checkbox Checkbox Checkbox Checkbox Checkbox Checkbox Checkbox	Comment  Comment
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94 99 No. 99 99 99 99 99 99 100 100 0 0 0 0 0 0 0	<ul> <li> Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping falls</li> <li> Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails</li> <li>Interlocks can be opened for demonstration</li> <li>TRACTIVE SYSTEM PROTECTION</li> <li>Checkpoint</li> <li>Check for each TS enclosure</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Not possible to reach any TS potentials with a black lightning bott on yellow background)</li> <li>Denergy meter is fully enclosed in a housing and not in the accumulator</li> <li>Inergy meter is rigidly mounted</li> <li>Check energy meter functionality and connectivity</li> <li>Seal energy meter enclosure(s)</li> <li>GROUNDING CHECKS</li> <li>Checkpoint</li> <li>A conductive part is grounded when having ≤100 mΩ measured at 1 A to LVS ground and being able to continuously carry ≥10 % of the TS main fuse</li> <li>It is possible to join two TS enclosures, one following EV 3.1.1 point 1 and the other one following point 2, if each individual is fully closed</li> <li>Check for each TS enclosure</li> <li> all materials used to build a TS enclosure separately have a resistance ≥2MΩ@500 V ⇒ fully isolated TS enclose, no grounded layer needed</li> <li> expect e.g. screws, (shielded) connectors, backing plates isolating materials used ⇒ fully isolated TS enclose, no grounded layer needed</li> <li> at least one material has &lt;2MΩ ⇒ ≥0.5 mm thick solid grounded layer made of aluminium</li> </ul>	Checkbox  Checkbox  Checkbox  Checkbox  Checkbox  Checkbox  Checkbox  Checkbox	Comment         Image: Commen
94 99 No. 99 99 99 99 99 100 100 (0 100 (0 100) (0 100) (0 100) 100 (0 100) 100 (0 100) 100 (0 100) 100 (0 100) 100 (0 100) (0 10) (0 100) (0 10) (0) (0) (0)) (0)	<ul> <li> Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping falls</li> <li> Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails</li> <li>Interlocks can be opened for demonstration</li> <li>TRACTIVE SYSTEM PROTECTION</li> <li>Checkpoint</li> <li>Check for each TS enclosure</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Protected from moisture</li> <li> Protected from moisture</li> <li> HV warning stickers placed (triangle with a black lightning bolt on yellow background)</li> <li>Denergy meter is fully enclosed in a housing and not in the accumulator</li> <li>Inergy meter is rigidly mounted</li> <li>Checkpoint</li> <li>Check continuously carry ≥10 % of the TS main fuse</li> <li>It is possible to join two TS enclosure so, one following EV 3.1.1 point 1 and the other one following point 2, if each individual is fully closed</li> <li>Check for each TS enclosure</li> <li> all materials used to build a TS enclosure separately have a resistance ≥2MΩ@500 V ⇒</li> <li>Inaterials used to build a TS enclosure separately have a resistance ≥2MΩ@500 V ⇒</li> <li> expect e.g. screws, (shielded) connectors, backing plates isolating materials used ⇒ fully isolated TS enclose, no grounded layer needed</li> <li> expect e.g. screws, (shielded) connectors, backing plates isolating materials used ⇒ fully isolated TS enclose, back protections are a resistance ≥2MΩ@500 V ⇒</li> <li> all material has &lt;2MΩ ⇒ ≥0.5 mm thick solid grounded layer made of aluminium or better (TSAC: ≥0.9 mm thick steal layer) required and properly grounded</li> </ul>	Checkbox Checkbox Checkbox Checkbox Checkbox Checkbox Checkbox	Comment  Comment
94 99 No. 99 99 99 99 100 100 (10) (10) (10) (10) (10) (10) (	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails         Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails         Interlocks can be opened for demonstration         TRACTIVE SYSTEM PROTECTION         Checkpoint         Check for each TS enclosure         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         3 Protected from moisture         9 HV warning stickers placed (triangle with a black lightning bolt on yellow background)         9 Energy meter is fully enclosed in a housing and not in the accumulator         1       Energy meter functionality and connectivity         2       Seal energy meter enclosure(s)         GROUNDING CHECKS       Checkpoint         A conductive part is grounded when having ≤100 mΩ measured at 1 A to LVS ground and being able to continuously carry ≥10 % of the TS main fuse         It is possible to join two TS enclosures, one following EV 3.1.1 point 1 and the other one following point 2, if each individual is fully closed         Check for each TS enclosure       all materials used to build a TS enclosure separately have a resistance ≥2MΩ@500 V ⇒ fully isolated TS enclosure         all materials used to build a TS enclosure separately have a resistance ≥2MΩ@500 V ⇒ fully isolated TS enclose, no grounded layer needed         expect e.g.	Checkbox	Comment         Comment         Image:
94 99 No. 99 99 99 99 99 100 100 00 00 100 00 100 1	<ul> <li> Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails</li> <li> Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails</li> <li>Interlocks can be opened for demonstration</li> <li>TRACTIVE SYSTEM PROTECTION</li> <li>Checkpoint</li> <li>Check for each TS enclosure,</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Not possible to reach any TS potentials with a black lightning bolt on yellow background)</li> <li>Denergy meter is fully enclosed (triangle with a black lightning bolt on yellow background)</li> <li>Denergy meter is fully mounted</li> <li>Check energy meter functionality and connectivity</li> <li>Seal energy meter enclosure(s)</li> <li>GROUNDING CHECKS</li> <li>Checkpoint</li> <li>A conductive part is grounded when having ≤100 mΩ measured at 1 A to LVS ground and being able to continuously carry ≥10 % of the TS main fuse</li> <li>It is possible to join two TS enclosures, one following EV 3.1.1 point 1 and the other one following point 2, if each individual is fully closed</li> <li>Check for each TS enclosure</li> <li> all materials used to build a TS enclosure separately have a resistance ≥2MQ@500 V ⇒ fully isolated TS enclose, no grounded layer needed</li> <li> expect e.g. screws, (shielded) connectors, backing plates isolating materials used ⇒ fully isolated TS enclose, no grounded layer needed but protruding elements must be properly grounded</li> <li> at least one material has &lt;2MΩ ⇒ ≥0.5 mm thick solid grounded layer made of aluminium or better (TSAC: ≥0.9 mm thick steal layer) required and properly grounded</li> <li>Measure resistance of conductive par</li></ul>	Checkbox	Comment         Comment         Image:
94 99 No. 99 99 99 99 100 100 (10) (10) No. 9 100 100 100 100 100 100 100 100 100 1	Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails         Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails         Interlocks can be opened for demonstration         TRACTIVE SYSTEM PROTECTION         Checkpoint         Check for each TS enclosure         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)         Not possible to reach any TS potentials with a black lightning bolt on yellow background)         Denergy meter is fully enclosed in a housing and not in the accumulator         1 Energy meter is rigidly mounted         2 Check energy meter functionality and connectivity         2 Seal energy meter enclosure(s)         GROUNDING CHECKS         Checkpoint         A conductive part is grounded when having ≤100 mΩ measured at 1 A to LVS ground and being able to continuously carry ≥10 % of the TS main fuse         It is possible to join two T	Checkbox  Checkbox  Checkbox  Checkbox  Checkbox  Checkbox  Checkbox  Checkbox  Checkbox	Comment         Comment         Image:
94 99 No. 99 99 99 99 99 99 100 100 00 00 100 100	<ul> <li> Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails</li> <li> Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails</li> <li>Interlocks can be opened for demonstration</li> <li>TRACTIVE SYSTEM PROTECTION</li> <li>Checkpoint</li> <li>Check for each TS enclosure</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Protected from moisture</li> <li> HV warning stickers placed (triangle with a black lightning bolt on yellow background)</li> <li>Denergy meter is fully enclosed in a housing and not in the accumulator</li> <li>Inergy meter is rigidly mounted</li> <li>Check energy meter enclosure(s)</li> <li>GROUNDING CHECKS</li> <li>Checkpoint</li> <li>A conductive part is grounded when having ≤100 mΩ measured at 1 A to LVS ground and being able to continuously carry ≥10 % of the TS main fuse</li> <li>It is possible to join two TS enclosures, one following EV 3.1.1 point 1 and the other one following point 2, if each individual is fully closed</li> <li>Check for each TS enclosure</li> <li> all materials used to build a TS enclosure separately have a resistance ≥2MΩ@500 V ⇒ fully isolated TS enclose, no grounded layer needed</li> <li> expect e.g. screws, (shielded) connectors, backing plates isolating materials used ⇒ fully isolated TS enclose, no grounded layer needed but protruding elements must be properly grounded</li> <li> at least one material has &lt;2MΩ ⇒ ≥0.5 mm thick solid grounded layer made of aluminium or better (TSAC: ≥0.9 mm thick steal layer) required and properly grounded</li> <li>Measure resistance of conductive parts to LVS ground (max. 100 mΩ@1 A)</li></ul>	Checkbox  Checkb	Comment         Comment         Image:
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94 94 94 No. 97 97 97 97 97 97 97 97 97 97 97 100 100 100 100 100 100 100 100 100	<ul> <li> Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails</li> <li> Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails</li> <li>Interlocks can be opened for demonstration</li> <li><b>TRACTIVE SYSTEM PROTECTION</b></li> <li>Checkpoint</li> <li>Check for each TS enclosure</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Not possible to reach any TS potentials with a black lightning bolt on yellow background)</li> <li>Denergy meter is fully enclosed in a housing and not in the accumulator</li> <li>Energy meter is rigidly mounted</li> <li>Check energy meter functionality and connectivity</li> <li>Seal energy meter enclosure(s)</li> <li><b>GROUNDING CHECKS</b></li> <li>Checkpoint</li> <li>A conductive part is grounded when having ≤100 mΩ measured at 1 A to LVS ground and being able to continuously carry ≥10 % of the TS main fuse</li> <li>It is possible to join two TS enclosures, one following EV 3.1.1 point 1 and the other one following point 2, if each individual is fully closed</li> <li>Check for each TS enclosure</li> <li> all materials used to build a TS enclosure separately have a resistance ≥2MΩ@500 V ⇒ fully isolated TS enclose, no grounded layer needed</li> <li> expect e.g. screws, (shielded) connectors, backing plates isolating materials used ⇒ fully isolated TS enclose, no grounded layer needed</li> <li> at anaterials used to build a TS enclosure separately have a resistance ≥2MΩ@500 V ⇒ fully isolated TS enclose, no grounded layer needed</li> <li> at an aterial has &lt;2MΩ ⇒ ≥0.5 mm thick solid grounded layer made of aluminium or better (TSAC; ≥0.9 mm thick steal layer</li></ul>	Checkbox	Comment         Comment         Image:
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94 99 No. 99 99 99 99 100 100 (0 100 0 0 100 100 100 100 100	<ul> <li> Outboard wheel motors have a dedicated interlock wire routed along the TS wiring, must act before the TS wiring or its clamping fails</li> <li> Outboard wheel motors have a dedicated interlock wire routed along a suspension member, must act if the suspension fails</li> <li>Interlocks can be opened for demonstration</li> <li>TRACTIVE SYSTEM PROTECTION</li> <li>Checkpoint</li> <li>Check for each TS enclosure</li> <li> Not possible to reach any TS potentials with insulated test probe (100 mm length, 6 mm diameter)</li> <li> Protected from moisture</li> <li> Not possible to reach any TS potentials with a black lightning bolt on yellow background)</li> <li>Denergy meter is fully enclosed in a housing and not in the accumulator</li> <li>Energy meter is rigidly mounted</li> <li>Check energy meter functionality and connectivity</li> <li>Seal energy meter enclosure(s)</li> <li>GROUNDING CHECKS</li> <li>Check for each TS enclosure</li> <li> alt possible to point to TS enclosures, one following EV 3.1.1 point 1 and the other one following point 2, if each individual is fully closed</li> <li>Check for each TS enclosure</li> <li> all materials used to build a TS enclosure separately have a resistance ≥2MΩ@500 V ⇒ fully isolated TS enclose, no grounded layer needed</li> <li> expect e.g. screws, (shielded) connectors, backing plates isolating materials used ⇒ fully grounded</li> <li> alt east one material has &lt;2MΩ ⇒ ≥0.5 mm thick solid grounded layer made of aluminium or better (TSAC: ≥0.9 mm thick steal layer) required and properly grounded</li> <li>Measure resistance of conductive parts to LVS ground (max. 100 mΩ@1 A)</li> <li>Use second LVS ground measurement point for 4-wire connection if available</li> <li> main hoop</li> <li> seat mounting points</li> <li> firewall</li> </ul>	Checkbox  Checkb	Comment Commen

	111	TS accumulator container		
	112	TS motors		
	113	TS enclosures if applicable		
	114	TS enclosure protruding parts if applicable		
	115	Each grounding is able to carry >10 % of TS main fuse		
	0	More the provide the parts to $1/2$ around (max 100.0 $\oplus$ 0.4)		
	0			
	0	carbon fiber part within 10 cm around 1S part		
	Ο	suspension front left or right if applicable		
	$\odot$	suspension rear left or right if applicable		
		DISCHARGE CIRCUIT AND BODY PROTECTION RESISTORS		
No.		Checkpoint	Checkbox	Comment
	►	Measure resistance between TS+ and TS- Measuring Points		
	116	Resistance is 30 k $\Omega$ + discharge resistor		
	117	Body protection resistor power and voltage rating is sufficient		
	118	Dis-charge power rating is sufficient for continuous dis-charge		
	119	Resistor Derating was considered for Power Rating		
		INSULATION MEASUREMENT TEST		
No.		Checkooint	Checkbox	Comment
	•	Choose test voltage to 500V	Oncorbox	Commone
		Connect insulation tester to TS+ and LV ground		
	100			
	120	Connect inculation tester to TS, and LVMD		
	•	Connect institution tester to 15- and LVMP		
	•	$M\Omega$		
	121	Resistance is much higher than (min. 50002/V*Umax)		
	122	Resistances are nearly equal		
	123	IMD chassis ground measurement line from TSAC connected to the main hoop by a separate		
		TEST AT HIGH VOLTAGE		
Na			Ohaalihaa	Or manual second s
NO.			Checkbox	Comment
	•			
	►	Connect multimeter between TS+ and TS- Use the team's multimeter and test leads from the nush bar. Set multimeter into manual range		
	•	Connect multimeter between 1S+ and 1S- Use the team's multimeter and test leads from the push bar. Set multimeter into manual range Switch on TSMS with LVMS deactivated		
	► ►	Connect multimeter between 1S+ and 1S- Use the team's multimeter and test leads from the push bar. Set multimeter into manual range Switch on TSMS with LVMS deactivated		
	► 124	Connect multimeter between 1S-1 and 1S- Use the team's multimeter and test leads from the push bar. Set multimeter into manual range Switch on TSMS with LVMS deactivated Voltage at TS measurement points less or equal 60VDC		
	► 124 ►	Connect multimeter between 1S4 and 1S- Use the team's multimeter and test leads from the push bar. Set multimeter into manual range Switch on TSMS with LVMS deactivated Voltage at TS measurement points less or equal 60VDC Switch on LVMS with TSMS deactivated IMD and AMS indicator light illuminate for 1 to 2 c for visible shock		
	► 124 ► 125	Connect multimeter between 1S4 and 1S- Use the team's multimeter and test leads from the push bar. Set multimeter into manual range Switch on TSMS with LVMS deactivated Voltage at TS measurement points less or equal 60VDC Switch on LVMS with TSMS deactivated IMD and AMS indicator light illuminate for 1 to 3 s for visible check		
	► 124 ► 125 126	Connect multimeter between 1S4 and 1S- Use the team's multimeter and test leads from the push bar. Set multimeter into manual range Switch on TSMS with LVMS deactivated Voltage at TS measurement points less or equal 60VDC Switch on LVMS with TSMS deactivated IMD and AMS indicator light illuminate for 1 to 3 s for visible check Voltage at TS measurement points less or equal 60VDC		
	► 124 ► 125 126 ►	Connect multimeter between 1S-1 and 1S- Use the team's multimeter and test leads from the push bar. Set multimeter into manual range Switch on TSMS with LVMS deactivated Voltage at TS measurement points less or equal 60VDC Switch on LVMS with TSMS deactivated IMD and AMS indicator light illuminate for 1 to 3 s for visible check Voltage at TS measurement points less or equal 60VDC Switch on TSMS and all shutdown buttons		
	► 124 ► 125 126 ►	Connect multimeter between 1S-1 and 1S- Use the team's multimeter and test leads from the push bar. Set multimeter into manual range Switch on TSMS with LVMS deactivated Voltage at TS measurement points less or equal 60VDC Switch on LVMS with TSMS deactivated IMD and AMS indicator light illuminate for 1 to 3 s for visible check Voltage at TS measurement points less or equal 60VDC Switch on TSMS and all shutdown buttons Reset any IMD or AMS errors if possible, otherwise reset LVS		
	<ul> <li>124</li> <li>125</li> <li>126</li> <li>127</li> </ul>	Connect multimeter between 1S4 and 1S- Use the team's multimeter and test leads from the push bar. Set multimeter into manual range Switch on TSMS with LVMS deactivated Voltage at TS measurement points less or equal 60VDC Switch on LVMS with TSMS deactivated IMD and AMS indicator light illuminate for 1 to 3 s for visible check Voltage at TS measurement points less or equal 60VDC Switch on TSMS and all shutdown buttons Reset any IMD or AMS errors if possible, otherwise reset LVS TS still deactivated		
	<ul> <li>▶</li> <li>124</li> <li>▶</li> <li>125</li> <li>126</li> <li>▶</li> <li>127</li> <li>▶</li> </ul>	Connect multimeter between 1S4 and 1S- Use the team's multimeter and test leads from the push bar. Set multimeter into manual range Switch on TSMS with LVMS deactivated Voltage at TS measurement points less or equal 60VDC Switch on LVMS with TSMS deactivated IMD and AMS indicator light illuminate for 1 to 3 s for visible check Voltage at TS measurement points less or equal 60VDC Switch on TSMS and all shutdown buttons Reset any IMD or AMS errors if possible, otherwise reset LVS TS still deactivated Activate TS, measure TS voltage during TS power-up		
	<ul> <li>124</li> <li>125</li> <li>126</li> <li>127</li> <li>128</li> </ul>	Connect multimeter between 1S4 and 1S- Use the team's multimeter and test leads from the push bar. Set multimeter into manual range Switch on TSMS with LVMS deactivated Voltage at TS measurement points less or equal 60VDC Switch on LVMS with TSMS deactivated IMD and AMS indicator light illuminate for 1 to 3 s for visible check Voltage at TS measurement points less or equal 60VDC Switch on TSMS and all shutdown buttons Reset any IMD or AMS errors if possible, otherwise reset LVS TS still deactivated Activate TS, measure TS voltage during TS power-up System is precharged before second AIR closes		
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	► 124 ► 125 126 ► 127 ► 127 ► 128 ► 129 ►	Connect multimeter between 1S4 and 1S- Use the team's multimeter and test leads from the push bar. Set multimeter into manual range Switch on TSMS with LVMS deactivated Voltage at TS measurement points less or equal 60VDC Switch on LVMS with TSMS deactivated IMD and AMS indicator light illuminate for 1 to 3 s for visible check Voltage at TS measurement points less or equal 60VDC Switch on TSMS and all shutdown buttons Reset any IMD or AMS errors if possible, otherwise reset LVS TS still deactivated Activate TS, measure TS voltage during TS power-up System is precharged before second AIR closes Switch off TSMS TS voltage decreases below 60VDC within 5 s Try to power-up TS with switched off TSMS		
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14	≤10∘ blocked by main hoop		
•	Activate LV system		
14:	TSAL and Cockpit Indicator(CI) are green only		
•	TS off indicator light		
	is inside the cockpit and marked with "TS off"		
	is visible in bright sunlight		
	is visible for the driver		
Þ	Activate TS		
14	TSAL flashes red with freq 2 Hz - 5 Hz and CI is off		
14	7 TSAL is clearly visible (horizontal position, entire illuminated surface)		
14	Voltage indicator shows presence of > 60 VDC		
•	Deactivate TS, disconnect AIR state detection circuitry, activate LV		
	If activation of LV system is not possible skip test		
14	SAL not illuminated and CI is off		
Þ	dedicated connector but <b>NOT</b> TSMP, activate LVS		
15	TSAL is both green and red flashing simultaneously and CI is on		
	Disconnect power supply, remove HVD, override HVD interlock (!! cover HV potentials !!),		
•	activate LV and TS		
15	TSAL and CI is off		
	INSULATION MONITORING DEVICE		
No.	Checkpoint	Checkbox	Comment
Þ	Determine Rtest = (max TS voltage * 250 Ω/V) - BPR		
Þ	Activate TS, connect RTest between TS+ and LV GND		
15:	2 Shutdown circuits opens within 30s		
15	Only IMD indicator light illuminates		
15	TS voltage decreases below 60VDC within 5s after shutdown circuit opens		
•	IMD indicator light		
	is illuminated red		
	is inside the cockpit and marked with "IMD"		
	is visible in bright sunlight, even from outside		
	is visible for the driver		
•	Try to activate the TS by the required additional action (EV 4.11.4)		
15	Reactivation of TS is not possible		
•	Push the reset button which is not accessible to the driver, if any		
16	Reactivation of TS is not possible		
•	Remove R lest. Wait 40s until IMD resets status output		
16	Reactivation of TS is not possible		
•	Push all reset buttons in the cockpit, if any		
16	Reactivation of TS is not possible		
•	Push the IMD reset button which is not accessible to the driver, if any		
16	Reactivation of TS is possible		
►	driver, if any. Connect RTest between TS+ and LV GND		
16	Shutdown circuits opens within 30s		
16	IMD indicator light illuminates		
Þ	Activate TS, connect RTest between TS- and LV GND		
16	Shutdown circuits opens within 30s		
	READY TO DRIVE ACTIVATION SEQUENCE		
No.	Checkpoint	Checkbox	Comment
Þ	Activate TS, press torque pedal		
16	No turning of motors		
Þ	Let the team set the vehicle to ready to drive mode		
16	Pressing brake pedal WHILE activating is necessary		
16	Ready to drive sound duration is 1 s to 3 s		
17	Ready to drive sound is min 80 dBA (2m around the vehicle)		
17	Ready to drive sound is easy recognizable and no animal		
	sound or song part		
►	Repeat the activation sequence, but push the brake pedal only once before finally pushing		
17'	2 No ready to drive mode possible		
• • • •	Disconnect the brake sensor		
17'	No ready to drive mode possible		
•	Disconnect the second brake sensor if applicable		
17.	No ready to drive mode possible		
.,.	APPS AND BSPD		
No.	Checkpoint	Checkbox	Comment
•	Set vehicle in ready to drive state		
17	Motors are able to turn		
•	Disconnect ≥50% of APPS		
		the second se	-

176	Motors do not turn		
•	Disconnect all APPS		
177	Motors do not turn		
►	Reconnect all APPS, disconnect any communication connection between ECU and inverter while motors turn. !! Only with enabled Speed Limit !!		
178	Motors stop turning		
►	Disconnect Brake Pressure sensor		
179	Motors stop turning		
►	Team simulates 5kW power, press brake representing hard braking (>0.5 s)		
180	TS shuts down		
►	Reactivate TS, disconnect BSPD current sensor		
181	TS shuts down		
►	Automatic BSPD reset installed?		
182	Reactivation of TS is only possible after 10s without implausibility		
183	Wire ends of auxiliary winding for current simulation are insulated (no tape)		
	OTHER COMMENTS		
	OTHER COMMENTS APPROVAL STATUS Approval (Control box) (DON'T CHANGE MANUALLY)	FALSE	
	OTHER COMMENTS APPROVAL STATUS Approval (Control box) (DON'T CHANGE MANUALLY)	FALSE	
	OTHER COMMENTS APPROVAL STATUS Approval (Control box) (DON'T CHANGE MANUALLY) Num True	FALSE	
	OTHER COMMENTS APPROVAL STATUS Approval (Control box) (DON'T CHANGE MANUALLY) Num True Num False	FALSE 0	